

Remarks

This is in response to the Office Action mailed on May 2, 2003. Claims 4 and 13 have been canceled without prejudice or disclaimer. Claim 1 has been amended to incorporate subject matter from claim 4, and claim 10 has been amended to incorporate subject matter from claim 13. In addition, claims 1, 2, 6, and 9 have been editorially amended, and claim 14 now depends from claim 10. No new matter has been added. Claims 1-3, 5-12 and 14 remain pending.

Reconsideration and allowance of all claims are respectfully requested.

Before addressing the rejections in the Office Action, a brief description of the state of the art and the inventive aspects described and claimed in the application is provided. Retaining walls are subjected to high loads exerted by soil behind the walls. Therefore, reinforcing material such as geogrid or geotextile fabric, as well as mechanical reinforcement members such as connector bars, are often employed between adjacent courses of blocks in a retaining wall to enhance stability. A retaining wall that includes an exterior corner presents unique challenges with respect to the use of reinforcement material. In exterior corners, the soil behind the wall exerts pressure on both walls forming the exterior corner, requiring reinforcement for both walls. See, for example, forces F_L and F_R illustrated in Figure 4 of the present application acting in perpendicular directions on the walls. In addition, a need to avoid vertical joint alignment in order to provide an aesthetically pleasing external corner is complicated due to the limit in the size and shape of the blocks that can be used to form the external corner.

The inventive blocks disclosed in the present application advantageously allow for adequate reinforcement of an external corner formed in a retaining wall, while minimizing vertical alignment of joints in the external corner.

I. Claim Rejections Under 35 U.S.C. § 112

Claims 1-5 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the rejection states that it is unclear whether the elongated retaining member recited in claim 1 is being claimed. This rejection is respectfully traversed, to the extent it is maintained.

The elongated retaining member mentioned in claim 1 is used to secure the corner blocks in place. Application, page 8, lines 25-28. The retaining member is mentioned to aid in defining the claimed channel. As claim 1 is directed to a corner block for use in a retaining wall, the elongated retaining member is not being affirmatively claimed in claim 1.

In view of these remarks, it is respectfully submitted that claim 1 and dependent claims 2, 3, and 5 should be sufficiently definite to satisfy section 112. Reconsideration and allowance are respectfully requested.

II. Claims Rejections Under 35 U.S.C. § 102

A. Claims 1, 2, and 4 and Hoedl

Claims 1, 2, and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hoedl et al., U.S. Patent No. 4,340,360. This rejection is respectfully traversed.

Claim 1 is directed to a corner block for use in a retaining wall. Claim 1 recites that the corner block includes a block body with at least a side and end surface being textured, as well as a channel formed in a top surface for receiving a portion of an elongated retaining member and where the channel is sized to receive therein the portion of the elongated retaining member extending parallel to the longitudinal axis of said channel with no portion of the elongated retaining member projecting above the top surface.

It is advantageous to form a corner block as recited by claim 1 so that exposed side and end surfaces of the corner block include an aesthetically pleasing textured appearance, and so that the corner block is configured to receive an elongated retaining member within its channel to thereby reinforce placement of the corner block.

Hoedl discloses a fire brick for a rotary kiln, as well as steel plates 6 used as joint material. Hoedl, column 4, lines 23-42 and Figures 7-10. Therefore, Hoedl fails to disclose or suggest a corner block for use in a retaining wall, as recited by claim 1.

Further, Hoedl fails to disclose or suggest a channel that is sized to receive the portion of the elongated retaining member with no portion of the retaining member projecting above the top surface. The rejection refers to element 6 in Hoedl as a retaining member. Without conceding that element 6 is a retaining member, when element 6 is disposed in the channel 1, element 6 projects above the top surface. Therefore, the channel 1 is not sized as claimed.

For at least these reasons, Hoedl fails to anticipate claim 1, as well as claim 2 that depends therefrom. Reconsideration and allowance are respectfully requested.

B. Claims 1, 3, 4, and 5 and Sorheim

Claims 1, 3, 4, and 5 were rejected under section 102(b) as being anticipated by Sorheim et al., U.S. Patent No. 5,820,304. This rejection is respectfully traversed.

Sorheim discloses blocks including a key way 6 formed in a rear face 4. Sorheim, Figure 1. Sorheim fails to disclose or suggest that the blocks can be used as corner blocks as required by claim 1. In addition, Sorheim does not teach a channel in the top surface as claimed.

The rejection refers to rotating the block such that the surface 4 is the top surface. There is no teaching in Sorheim to rotate the block in such a manner. If Sorheim were rotated as suggested in the rejection to provide the key way 6 being formed in a top surface of the block rather than the rear surface, this would result in the decorative front face of the Sorheim block becoming the bottom of the block. This clearly would not be desirable. Therefore, Sorheim does not teach or suggest rotating the block so that the surface 4 becomes the top surface.

For at least these reasons, reconsideration and allowance of claim 1 and dependent claims 3 and 5 are respectfully requested.

C. Claims 6, 7, and 9 and Campfield

Claims 6, 7, and 9 were rejected under section 102(b) as being anticipated by Campfield, U.S. Patent No. 2,226,369. This rejection is respectfully traversed.

Claim 6 is directed to a retaining wall comprising a plurality of blocks arranged into courses and including an exterior corner. Claim 6 recites that at least one course has a first height, and the one course at the exterior corner is formed from a plurality of subcourses of blocks. Claim 6 further recites that the blocks in each subcourse have a second height that is less than the first height of the course.

One example configuration of a retaining wall made in accordance with claim 6 is provided in Figures 5, 6, 8, and 9 of the application. In this non-limiting embodiment disclosed in the application, the exterior corner is formed from a plurality of subcourses of blocks 80 designated by "H" in Figures 8 and 9 that are approximately half the height of the standard blocks 60. Application, page 12, lines 14-19. For each course C₁, C₂,...C_n, the blocks at the exterior corner 52 are arranged into two subcourses SC_{n1} and SC_{n2}, as shown in Figures 8 and 9. For example, subcourse SC₁₁ of the first course C₁ is formed by a left corner block 10B, a half high standard block 80, and a partial, second half high standard block 80. In this manner, the

external corner can be constructed to both withstand the forces exerted on the corner, while minimizing vertical alignment of the joints.

Campfield discloses a "raggle block" 12 used to cover or protect free ends of flashing or roofing material 18 used on roofs of structures. See, for example, Figure 1 of Campfield.

Campfield does not disclose a retaining wall comprising a plurality of blocks arranged into courses, as recited by claim 6. Further, Campfield does not disclose that the raggle blocks can be used to form an exterior corner, or at least one course at the exterior corner that is formed from a plurality of subcourses of blocks each having a second height that is less than the first height of the course, as recited by claim 6.

Reconsideration and allowance of claim 6, as well as claims 7 and 9 that depend therefrom, are respectfully requested.

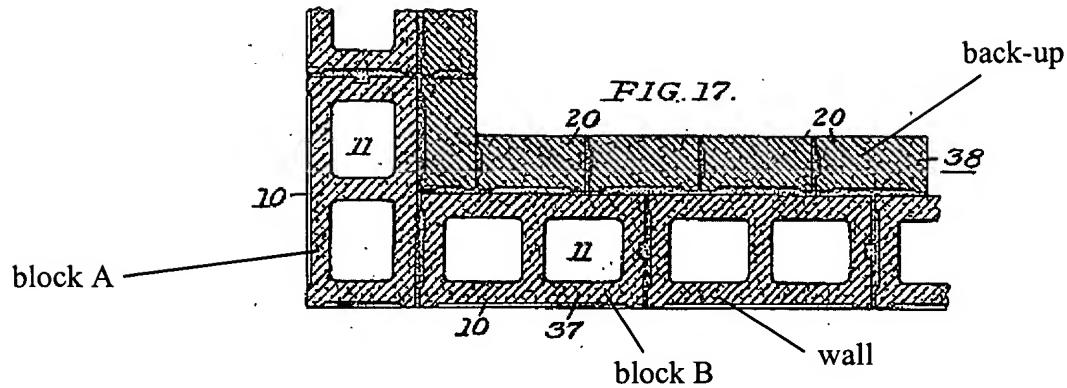
D. Claims 6, 7, and 9 and Henderson

Claims 6, 7, and 9 were rejected under section 102(b) as being anticipated by Henderson, U.S. Patent No. 2,151,468. This rejection is respectfully traversed.

As previously noted, claim 6 recites a retaining wall including at least one course at an exterior corner being formed from a plurality of subcourses of blocks each having a second height that is less than a first height of the course.

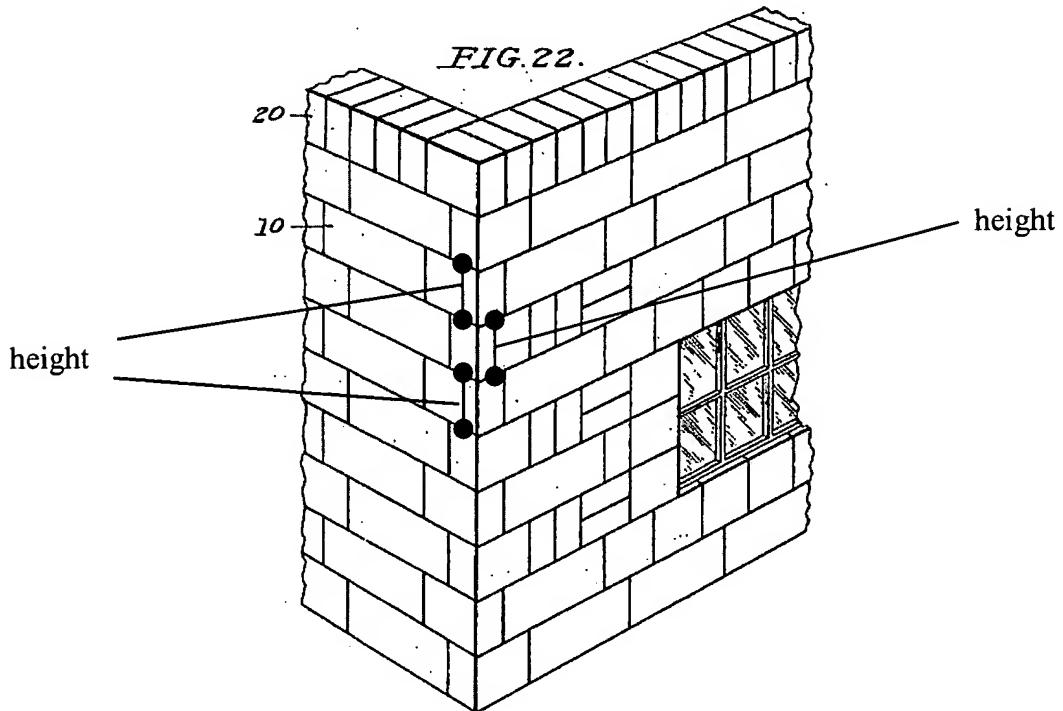
Henderson discloses a building block. The rejection references the walls shown in Figures 17 and 22 of Henderson as disclosing subcourses of blocks. This interpretation of Henderson is respectfully traversed.

Henderson discloses building blocks and fails to suggest that such blocks can be used to form a retaining wall as recited by claim 6. Further, Henderson fails to disclose or suggest at least one course at an exterior corner being formed from a plurality of subcourses of blocks having a second height that is less than a first height of the course, as recited by claim 6. For example, Figure 17 of Henderson, which appears to be a top view as illustrated below, shows a wall 37 formed of blocks 10 having a back-up 38 formed of quarter blocks 20. Henderson, page 2, column 2, lines 41-45.



Henderson, Figure 17 (annotation added). The exterior corner in the wall illustrated in Figure 17 is formed by blocks A and B noted above. The back-up 38 including blocks 20 is apparently formed behind the wall of blocks 10 and is not an exterior corner formed from a plurality of subcourses of blocks, as recited by claim 6. As a result, there are no subcourse blocks at the exterior corner that each have a second height that is less than the first height of a plurality of blocks

As shown in Figure 22 of Henderson, reprinted below, the corner block for each course of the wall is substantially the same height throughout and there are no courses that include any subcourses at the exterior corner.



Henderson, Figure 22 (annotation added).

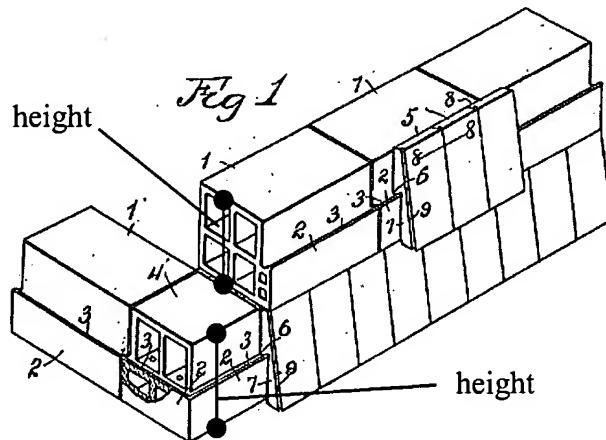
For at least these reasons, Henderson fails to anticipate claim 6, as well as claims 7 and 9 that depend therefrom. Reconsideration and allowance are requested.

E. Claims 6-9 and Huffman

Claims 6-9 were rejected under section 102(b) as being anticipated by Huffman, U.S. Patent No. 1,500,493. This rejection is respectfully traversed.

Huffman discloses a shingled wall construction comprising layers of tile or concrete blocks (see page 1, lines 19-24 and 29-34) and therefore fails to suggest that such tiles or blocks could be used to form a retaining wall as recited by claim 6.

Further, Huffman fails to suggest a retaining wall with at least one course at an exterior corner being formed from a plurality of subcourses of blocks each having a second height that is less than a first height of the course, as recited by claim 6. The corner blocks 4 illustrated in Huffman at Figure 1 are substantially the same height as the other blocks 1 in the course, as shown below.



Huffman, Figure 1 (annotation added). (Note that the longitudinal ledge 2 is formed as part of the corner blocks 4 and therefore does not constitute a separate course. Huffman, page 1, lines 57-61.) Therefore, Huffman does not disclose an exterior corner formed from a plurality of subcourses of blocks.

For at least this reason, reconsideration and allowance of claim 6 and dependent claims 7-9 are respectfully requested.

F. Claims 10 and 12 and Frantz

Claims 10 and 12 were rejected under section 102(b) as being anticipated by Frantz, U.S. Patent No. 2,994,162. This rejection is respectfully traversed.

Claim 10 is directed to a retaining wall. Claim 10 recites a plurality of courses each comprising a first plurality of blocks forming an exterior corner portion and a second plurality of blocks forming a wall portion adjacent the exterior corner portion, each block of said first plurality of blocks and said second plurality of blocks including a channel formed in a top surface thereof, and a reinforcement member retaining bar disposed within the channels in said second plurality of blocks. Claim 10 further recites that in a first course the second plurality of blocks each have a height that is greater than a height of each of the first plurality of blocks.

Frantz discloses building blocks, but fails to suggest that walls formed of such blocks could be used as a retaining wall as recited by claim 10. Further, Frantz fails to disclose that the second plurality of blocks each have a height that is greater than a height of each of the first plurality of blocks as recited by claim 10.

For at least these reasons, Frantz fails to anticipate claim 10, as well as claim 12 that depends therefrom. Reconsideration and allowance are respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 103

Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Frantz in view of Miller et al., U.S. Patent No. 5,595,460. In addition, claims 12 and 13 were rejected under section 103(a) as being unpatentable over Frantz in view of Henderson. These rejections are respectfully traversed, to the extent they are maintained.

Claim 13 has been canceled without prejudice or disclaimer.

Claims 11 and 12 depend from claim 10. As noted above, neither Frantz nor Henderson disclose a retaining wall with at least one course of said first plurality of blocks comprising a plurality of subcourses of blocks, as recited by claim 10.

Miller is cited solely for disclosing a retaining wall including reinforcement material. While the rejection's characterization of Miller is not conceded, Miller fails to remedy the shortcomings of Frantz and Henderson noted above in that Miller does not disclose a retaining wall with a second plurality of blocks each have a height that is greater than a height of each of a first plurality of blocks, as recited by claim 10.

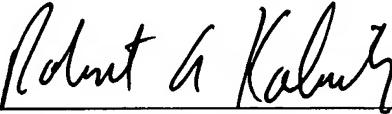
For at least these reasons, reconsideration and allowance of claims 11 and 12 are respectfully requested.

IV. Conclusion

In view of the above amendments and remarks, all claims should now be in condition for allowance. Favorable reconsideration is respectfully requested. The Examiner is encouraged to contact the undersigned Attorney with any questions regarding this application.

Respectfully submitted,
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